Quick Guide for WINUG

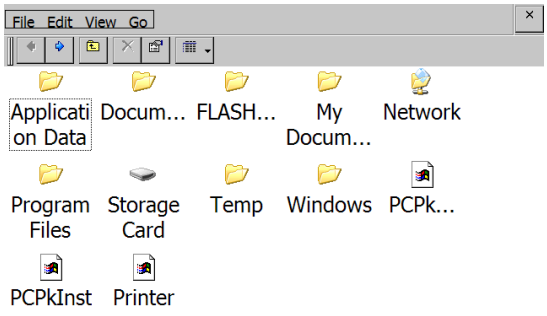
Overview

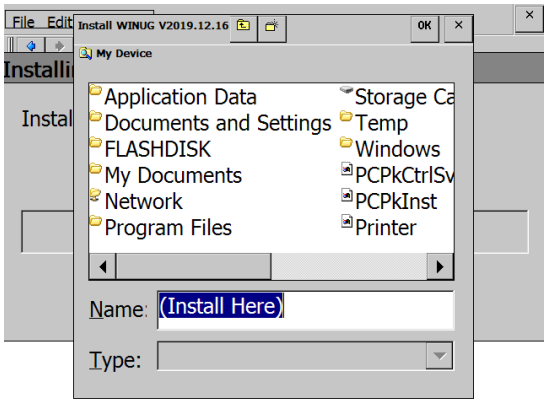
WinUG is designed for specific demands of underground mining survey. In the mining business, especially in underground mining, there are certain rules of how things must be done in a certain order. WINUG steers the user through the process and makes them more productive.

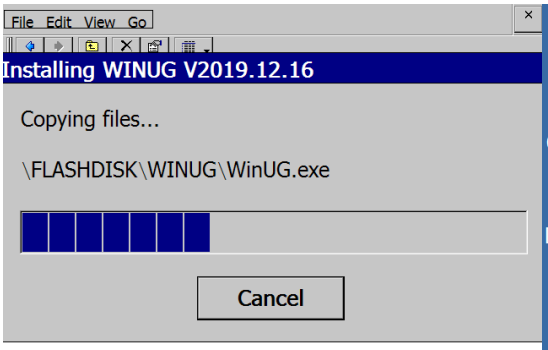
1. Installation and Registration

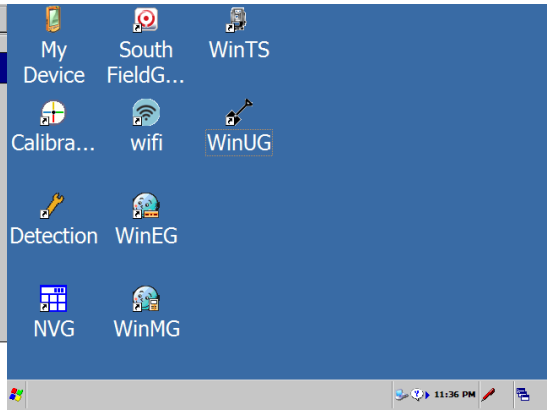
1.1 Installation

Copy the WINUG.cab file to SD card. Insert to N70 series TS. Go to My Device-Storage Card, double click the WINUG icon. It will automatically install. Please install it in default folder path.







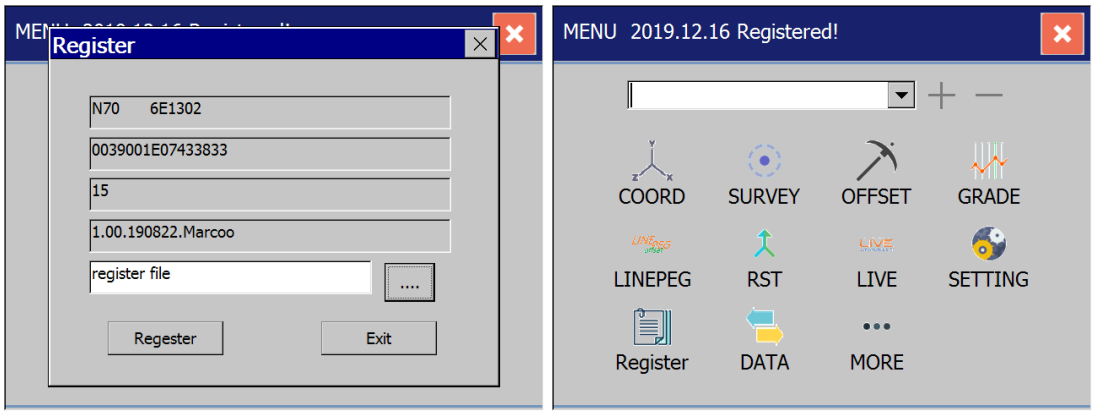


1.2 Registration

Run application, For *WINUG*,:

Before registering WinUG there is a trial period that will allow you to open and use WinUG 15 times with full functionality. after that, it will ask for register

code. if you do not have a registration file. Please contact your local distributor.

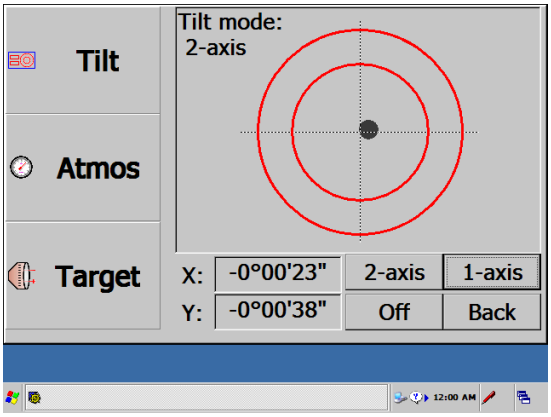


Press the apostrophe button to load the registration file from memory or SD card. Then press Register button. When it is done, it will show you the version and registration status.

2. Basic Survey setting

It is important to configure the correct parameters to make sure all measurement results are accurate. .

Press the ***STAR*** key to enter the menu as figure shows below.



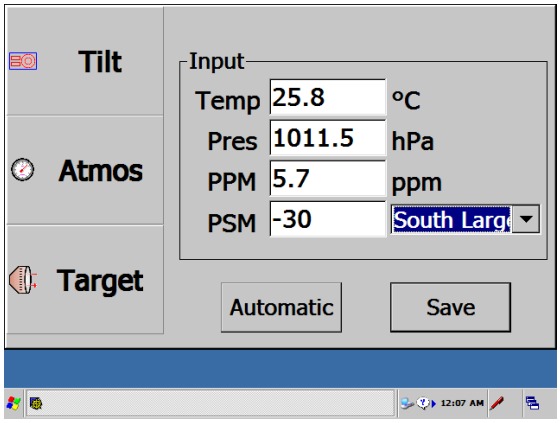
2.1 Leveling:

Turn ***ON/OFF, 2-axis, 1-axis***, adjust the tribrach foot screws adjusting the ***X*** and ***Y*** value as close as 0 you can.

2.2 Atmos:

Setting the ***temperature, Pressure and PPM***. You can manually input temperature or get the T-P sensor reading by pressing the Automatic button.

Set the prism constant.



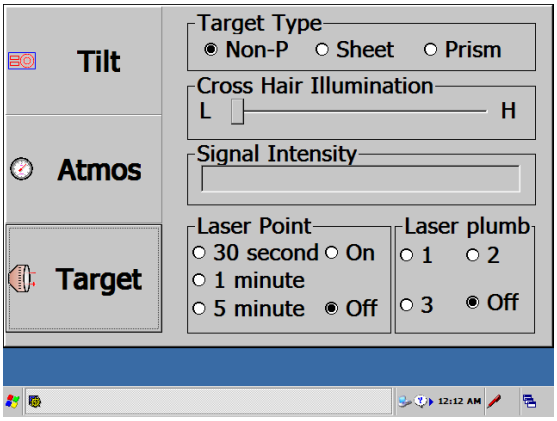
2.3 Target:

Target - choose Non-Prism, Prism or Sheet.

Cross Hair Illumination – adjust cross hair visibility.

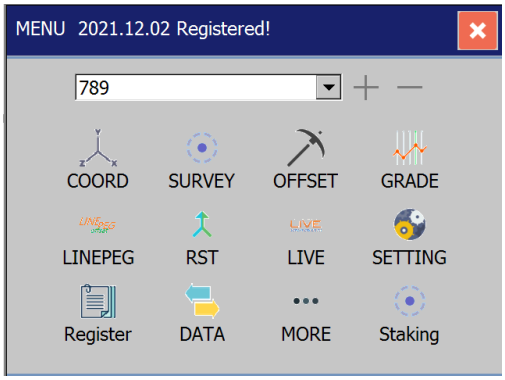
Laser Pointer – switch laser **on** or **off** or switch it on for a specific period after which it automatically switches off.

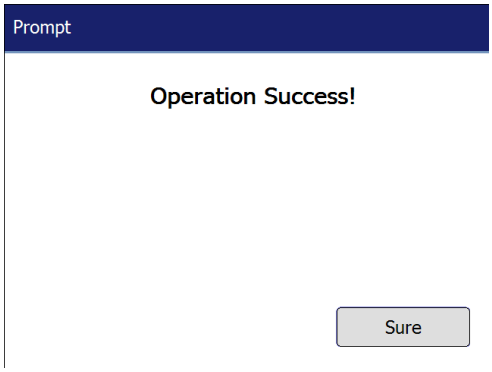
Laser plumb – set intensity of the down pointing laser or ***switch it off***



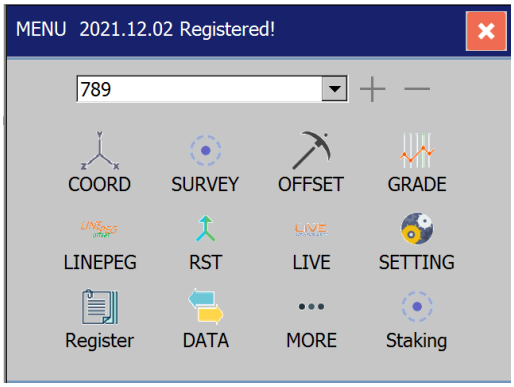
3. Jobs

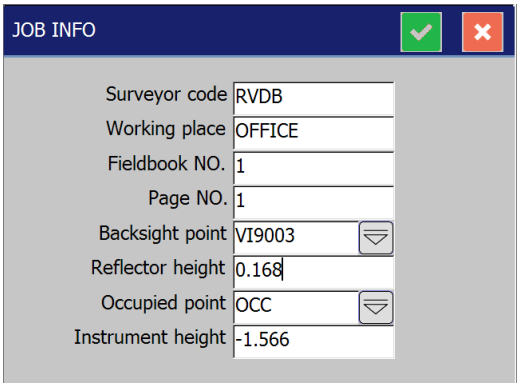
To create a job or project, type the project name in blank space and press "+" to.





4. Survey a Peg



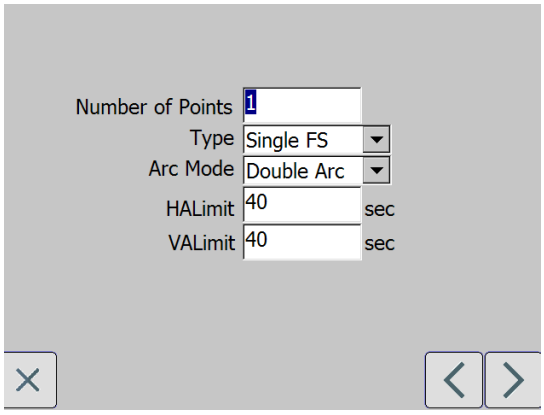


Press the ***SURVEY*** button on the main screen.

Input base information and select the ***Back sight point*** and ***Occupied point***.

Points can be selected from a list of existing points or imported from internal memory.

Instrument height allows the user to input both *negative and positive* values.

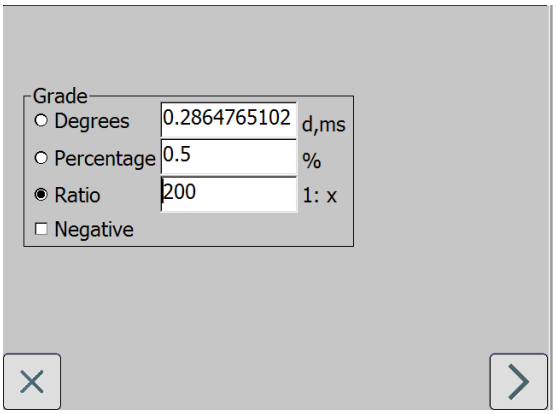


After we setup station and back sight, we need to set ***Number of Points, Type, Measurement mode, Horizontal and Vertical angle limitation***.

NB: Minimum number of points is 1 and maximum is 15.

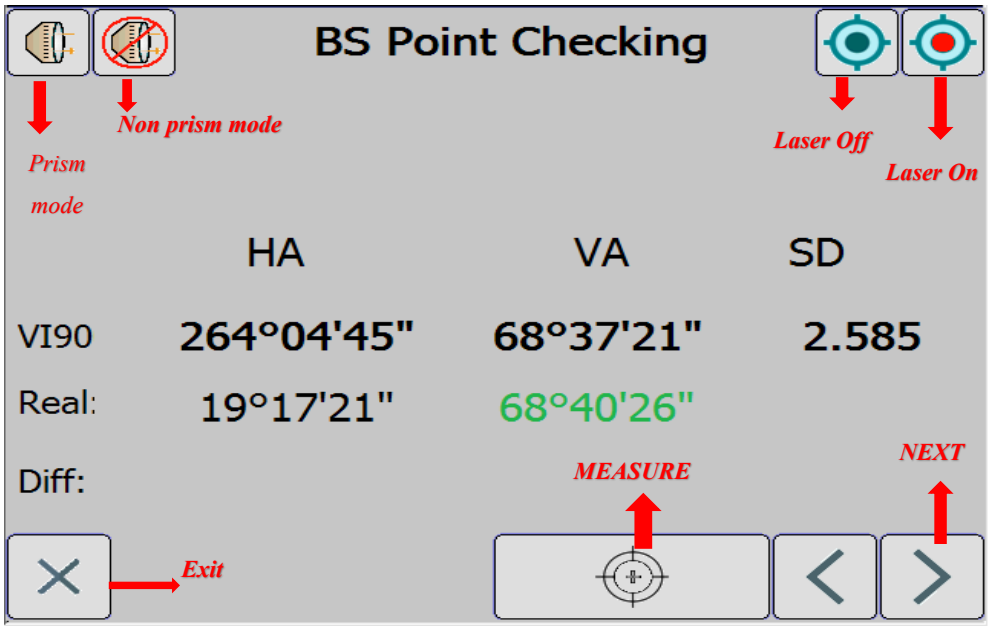
Type : Single FS or Double FS.

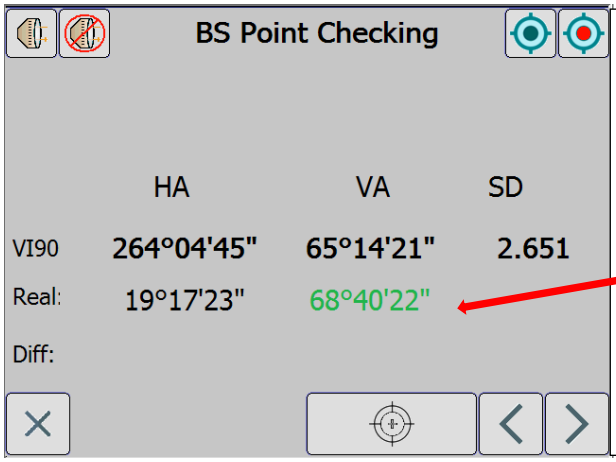
Arc Mode: Single Arc or Double Arc



We can also input the Grade (***this will calculate the grade elevation for your new Fore sight peg***)
The user can input the Grade in one of 3 options:
Degrees, Percentage or Ratio

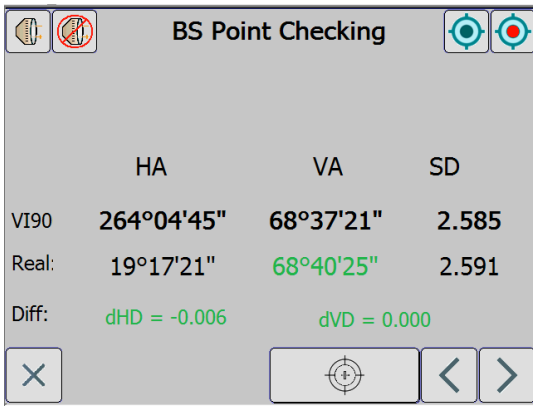
After you have completed all setup information, press the next button  to start your survey.





Turn instrument to backsight and press the measure button to set the correct Horizontal angle and display the SD

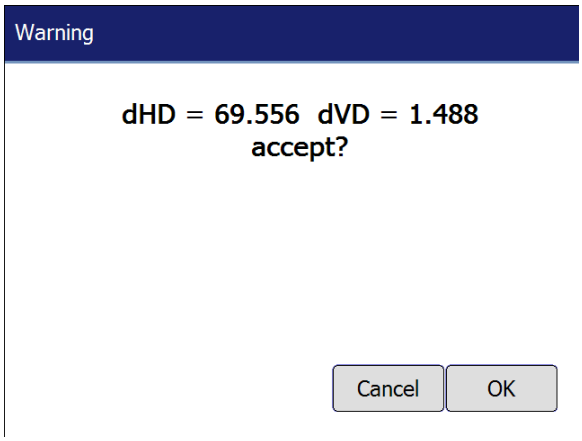
Note: the VA is displayed in green when the instrument is in the correct orientation, if the angle is displayed in red the telescope should be turned to the opposite face



This screen provides feedback on the quality of your setup:

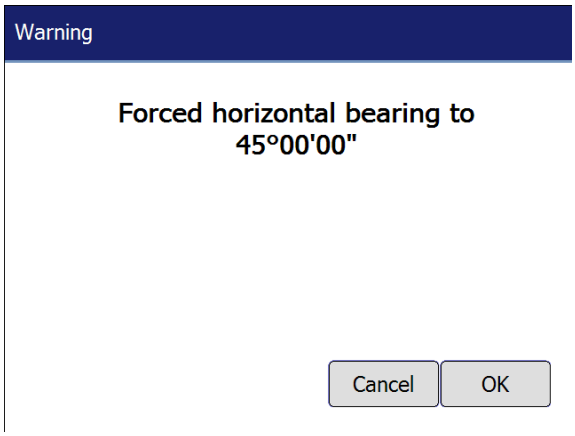
dHD is the difference between observed and calculated HD – if the difference is in tolerance this value will be displayed in green color if error is outside of tolerance the value is displayed in red color.

dVD is the difference in Vertical between observed and calculated VD

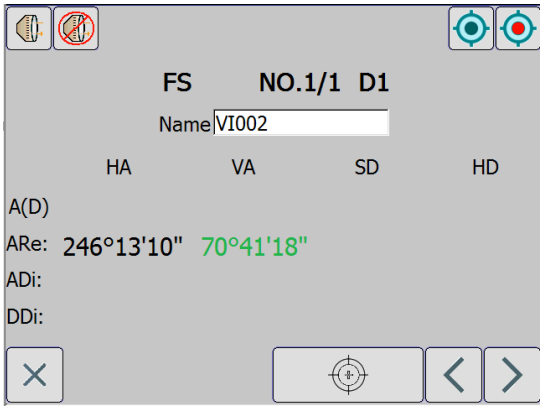


If the error for dHD and or dVD exceeded the tolerance this warning will appear to let you know there might be a problem with the setup.

If you still want to continue you can press OK



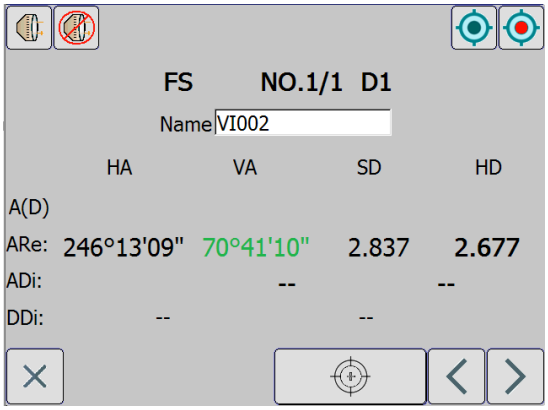
This message confirms that the Horizontal angle will be set to the angle calculated between the occupied point and the backsight point



<u>Follow the prompts on the screen</u>:
WinUG will guide you through the survey process
FS no1/1 D1: this means you should turn instrument to foresight observation first peg of two. D1 means this is the first Direct (Face 1) observation to this peg (TP1).

You should also give this peg a name. the name will auto increment for the next peg.

Press the measure button  to measure the SD

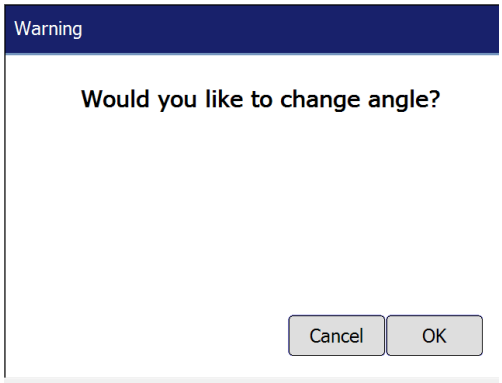


If there is a mistake in the angle or the distance displayed, make sure the target is in line with the crosshairs and press again

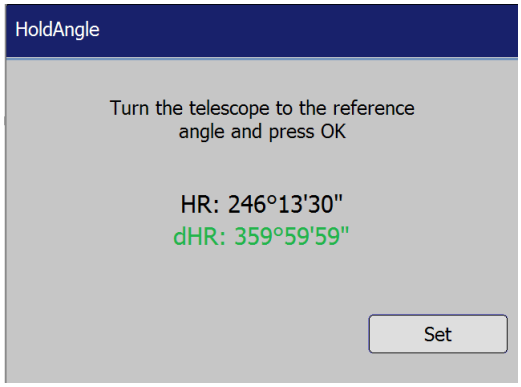
If you are happy with the angles and SD displayed press to continue to the next observation

Baseplate change 1

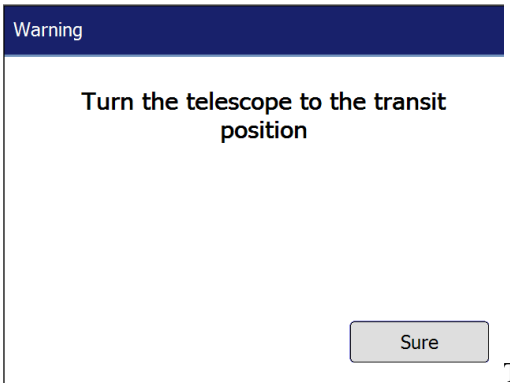
After we finish Direct (face 1) measurement, we have the possibility to change the horizontal angle (Base Plate Change). Baseplate changes are optional.



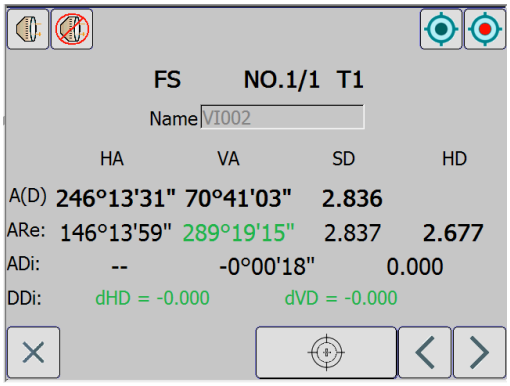
Click okay to agree to a baseplate change or Cancel if you don't want to do a baseplate change



Turn your instrument to a reference angle (90°), lock wait for horizontal angle to settle and then press **Set**.

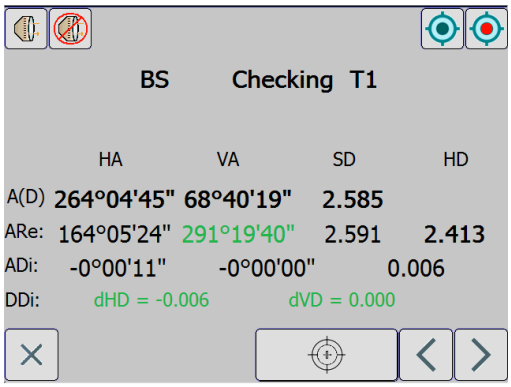


Turn telescope to transit position and click on **Sure**.



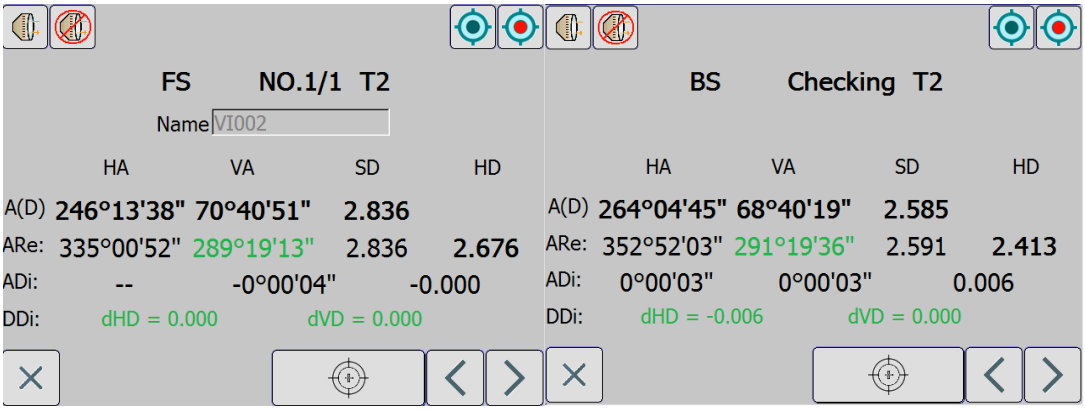
Observe foresight peg in transit and measure.

Once you have measured click next.

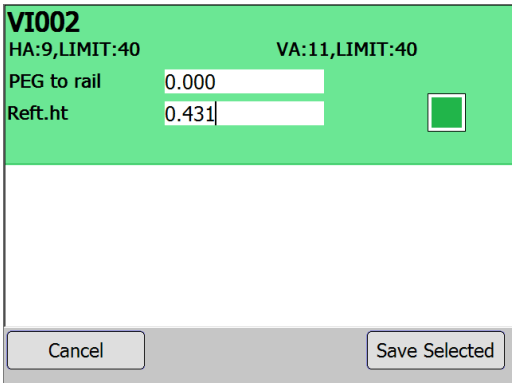


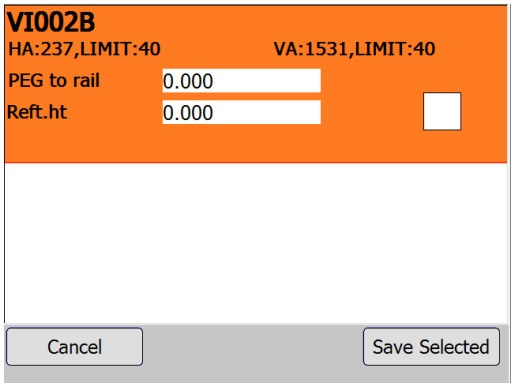
Observe you backsight peg in transit 1 and measure.

The instrument will prompt you to do another baseplate change. Proceed as per the steps above.



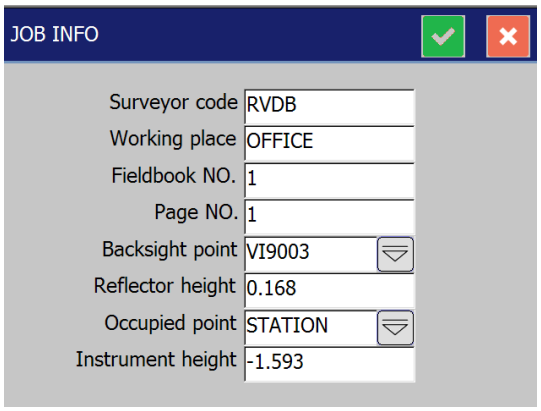
After completeing all obersvations one of the following two screens will be displayed;
If it is Green you are within your limits and the quality is good.
If it is orange you have exceeded your limits and the accuracy is poor.You can select the poor points to save anyway or if you don't select them they will be deleted
To accept your peg you must click on the tick box, input reflector (bob) height, peg to rail and click on **Save Selected**.

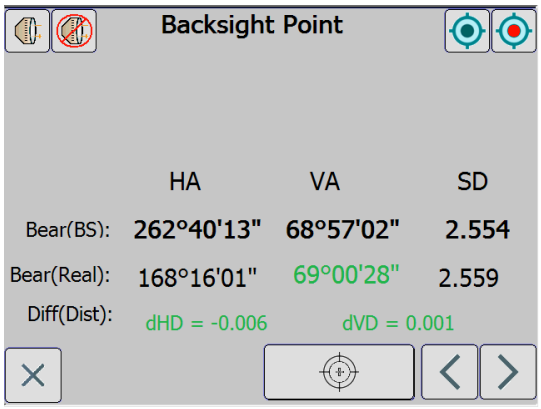


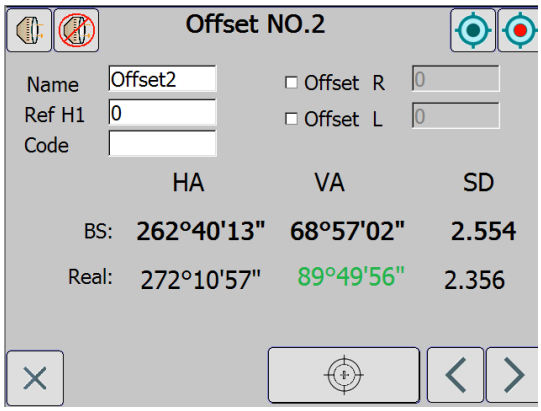


5. OFFSET

Step one is to set up the station, it will reuse the previous station point and back sight point information, if you need to change, please input the updated info and do backsight check again.



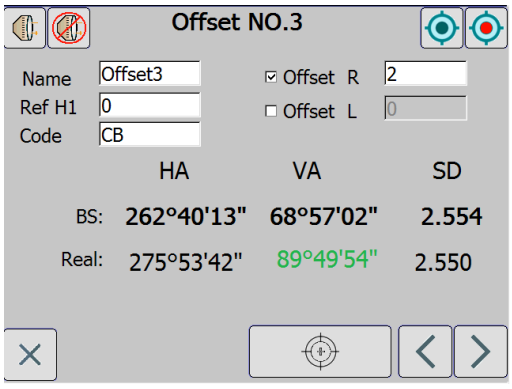




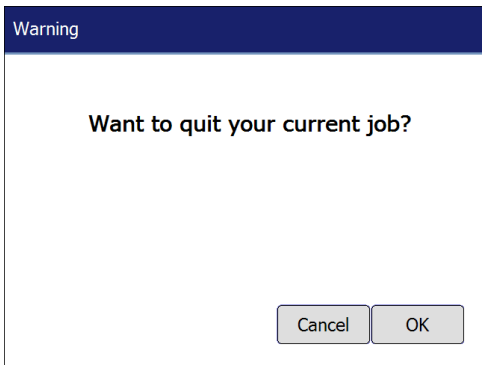
After station setup. We start offset measurement.
You can change the name of your offset
Press measure button to get result and press next to save and go to the next offset point.

Cubby offsetting

To offset a cubby, choose the direction to offset by either clicking **Offset R** or **Offset L** (direction from surveyors' perspective), then input offset value.
Please note it will only allow you to input a positive value.

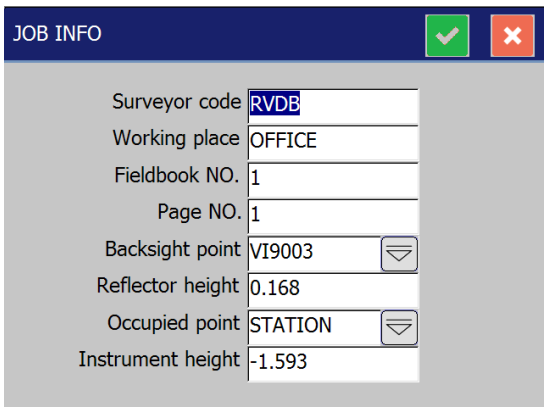


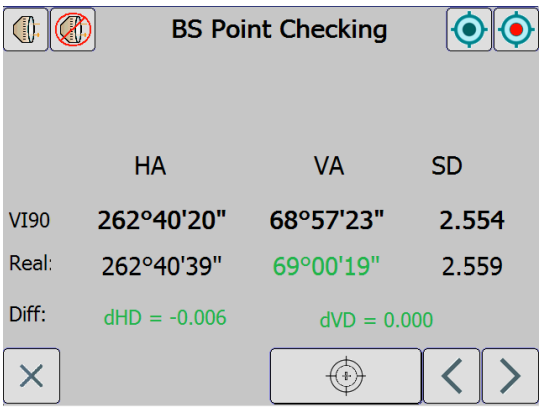
Press  to end the process and return to the main menu.

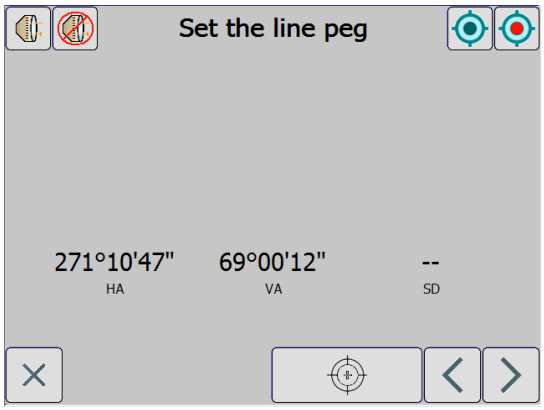


6. Grade

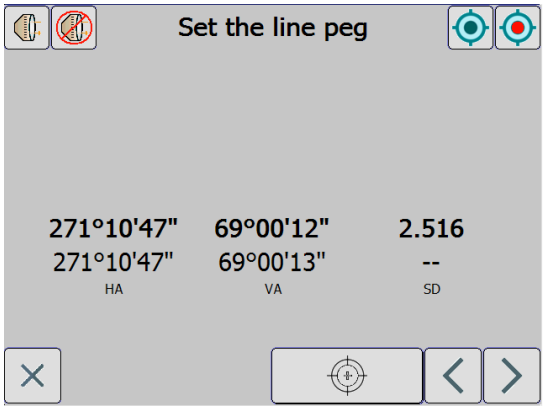
Step one is to set up the station, it will reuse the previous station point and back sight point information, if you need to change, please input the updated info and do backsight check again.

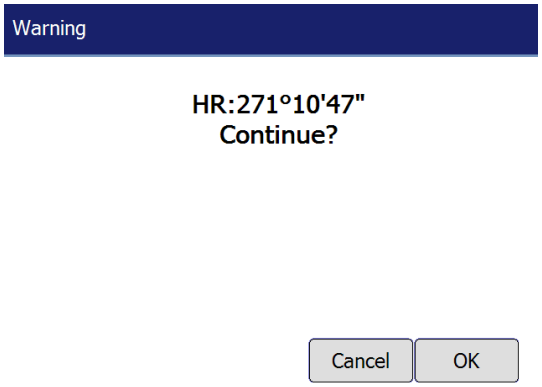




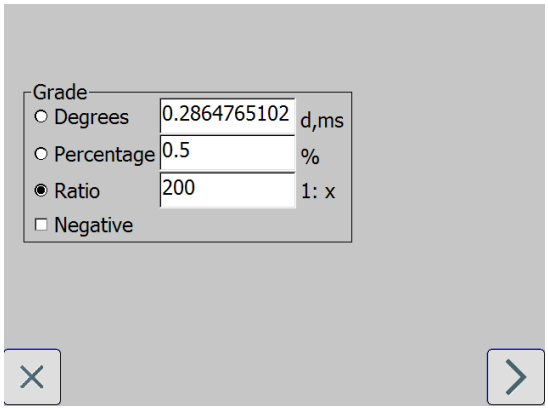


Sight the line peg or the direction of development. This is the direction in which the grade will be carried forward



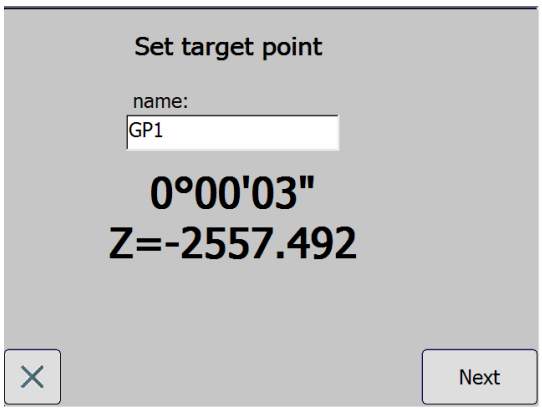


Direction in which grade will be installed is displayed press OK if the direction is correct.



The slope of the grade pegs can now be defined. It can be input either Degrees, Percentage or a Ratio.

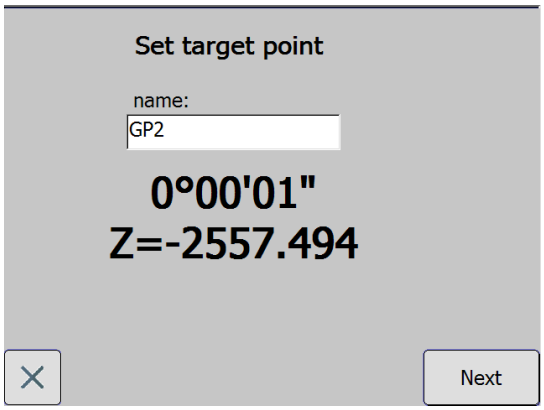
If the slope needs to go downhill also select the negative tick box

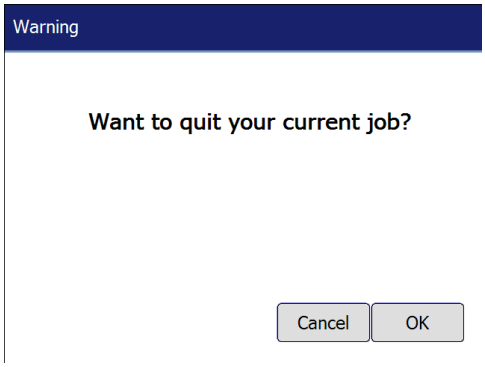


Input the name of the grade-peg to be installed

Turn the instrument to a position on the sidewall where you would like to install the grade peg and adjust the Telescope up or down until the reading on the screen display Zero – this is the position you should install your grade peg.

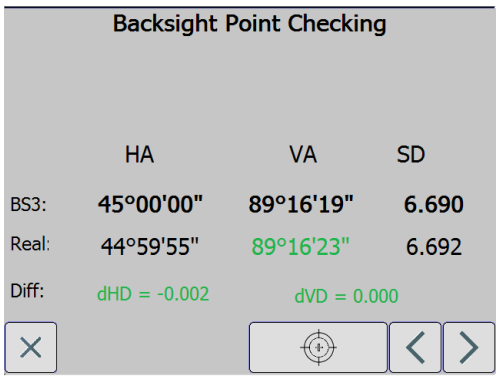
Press next and turn the instrument to where you would like to install the next Grade Peg

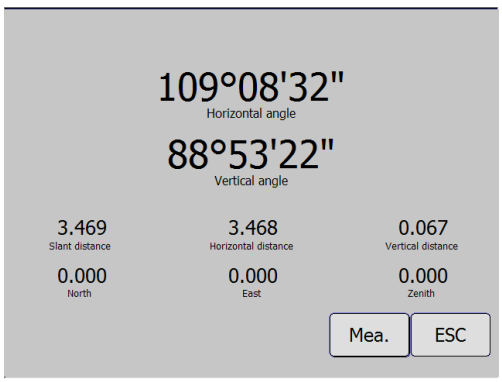




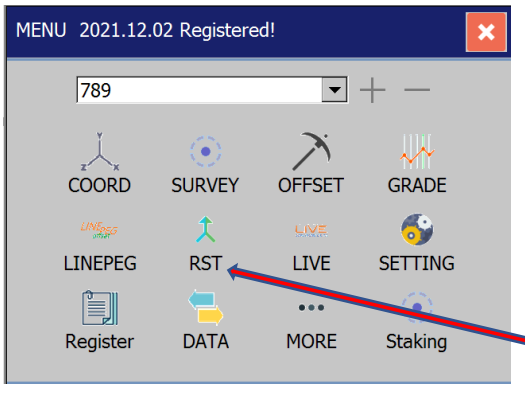
7. LIVE

The live mode is only for simple measurement of angle and distance, it can't be saved in memory
Press ESC to end this process and back to main menu.

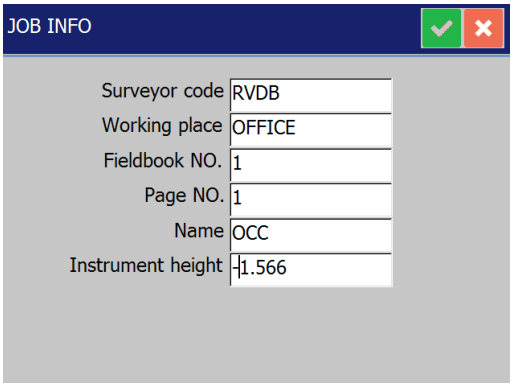


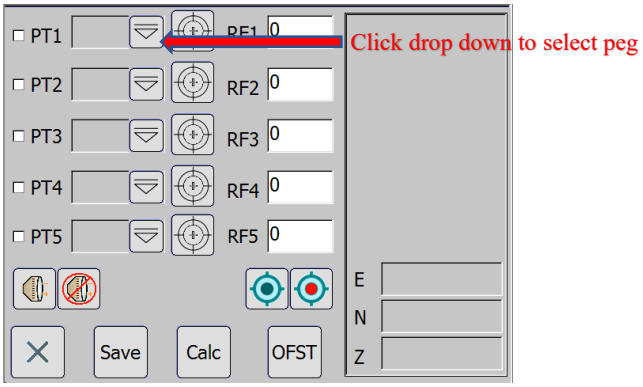


8. Resection

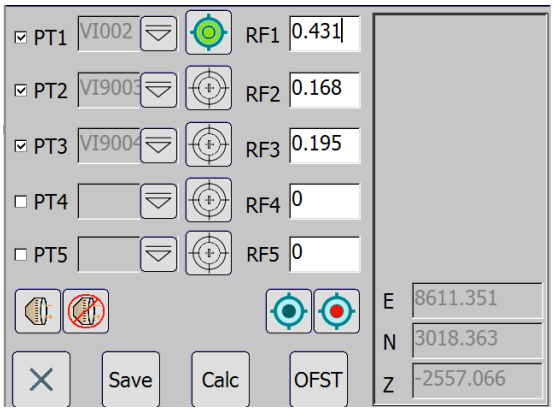


To get the station point from two or more known points select RST from main menu to do a resection. Pick up the reference point from memory or import from SD card. Observe the reference point and press measure button.



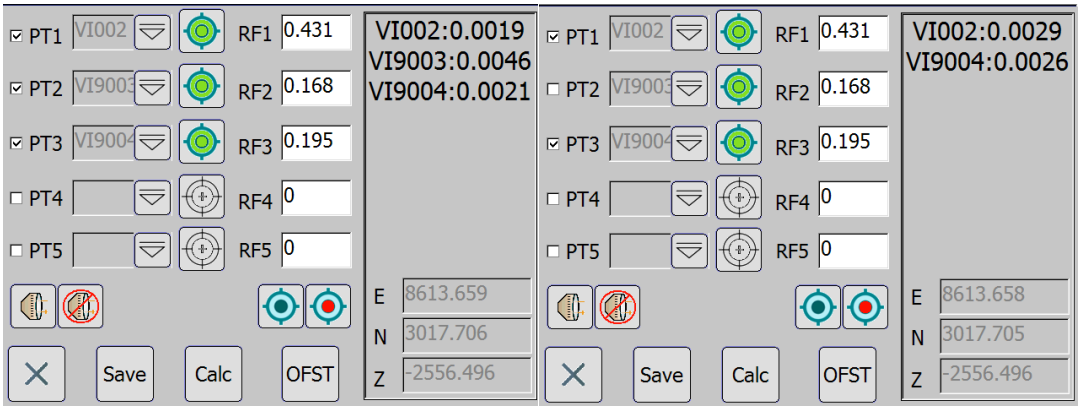


Click drop down to select peg



Points that have been measured will have a checked tick box and the measure button will turn green.

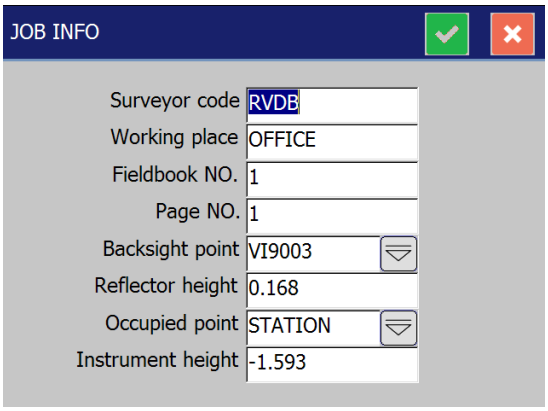
After that, you can pick up the check box which reference points you want to involve in the calculation.

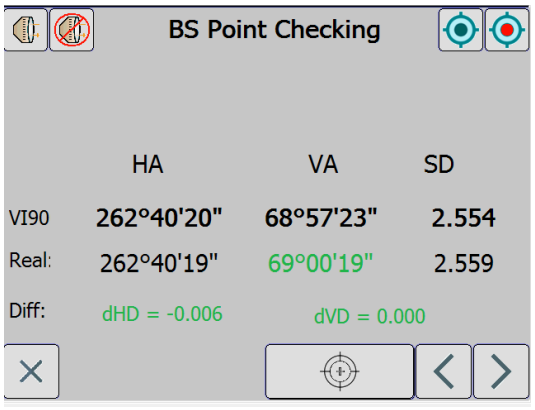


If the accuracy is not good enough, Change the reference points by unticking and ticking the checkboxes and recalculate or redo the measurements.
If you are satisfied with the accuracy, Press SAVE button.

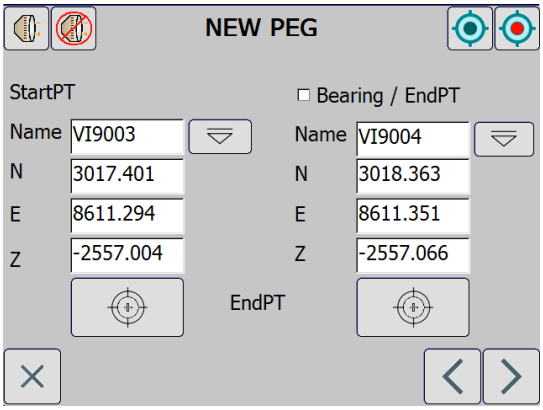
9. LinePeg

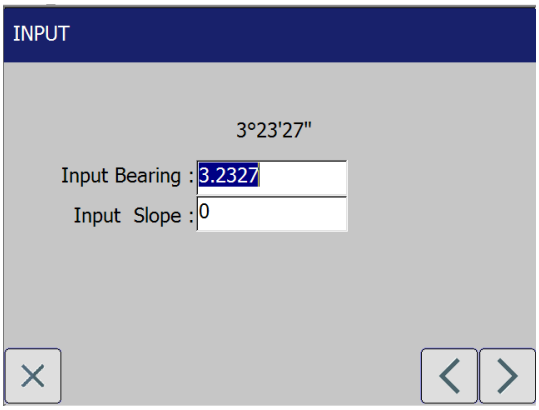
Station setup by measuring your backsight.

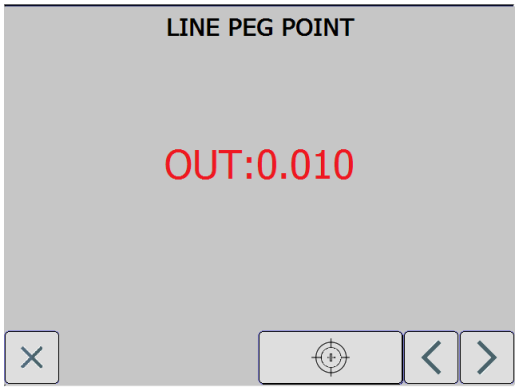


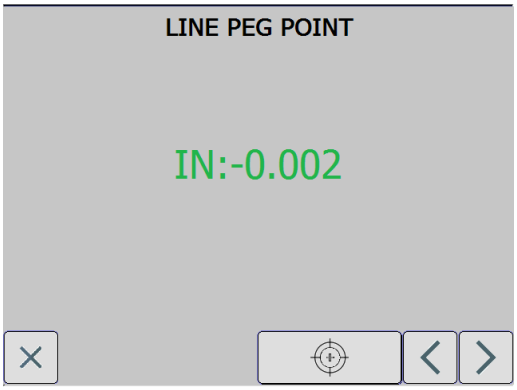


To define a line, you can do that by defining a start and end point or inputting a bearing.



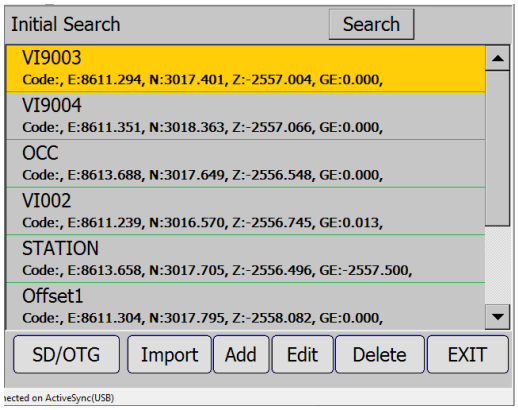


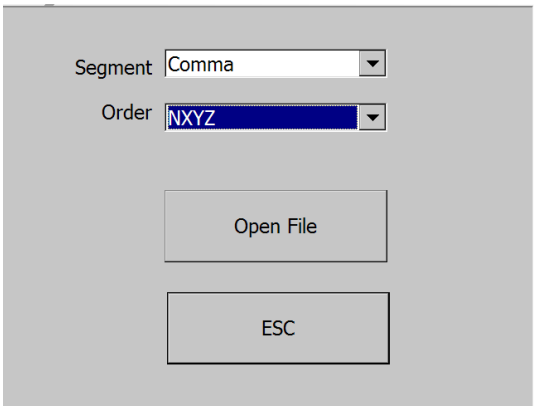


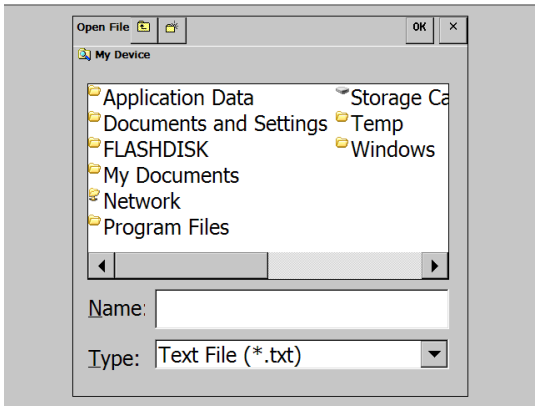


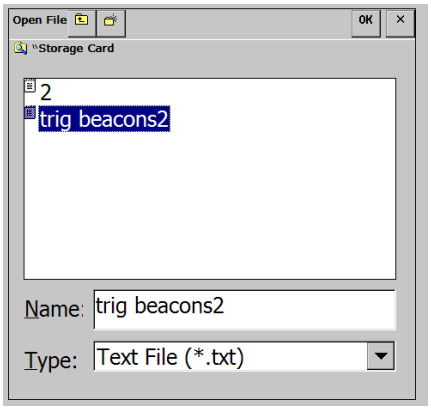
10. Import & Export

9.1 Import
DATA import in COORD submenu.



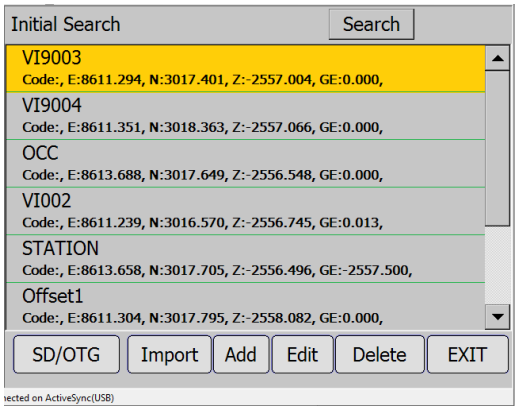


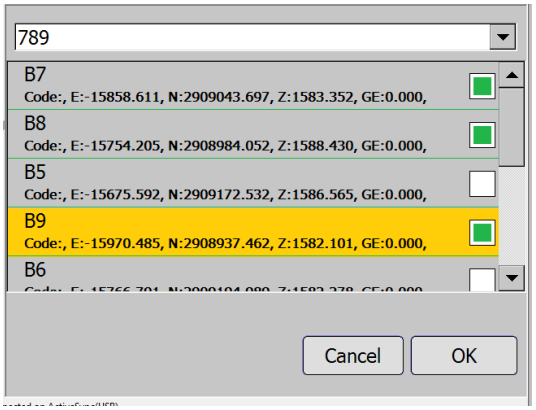




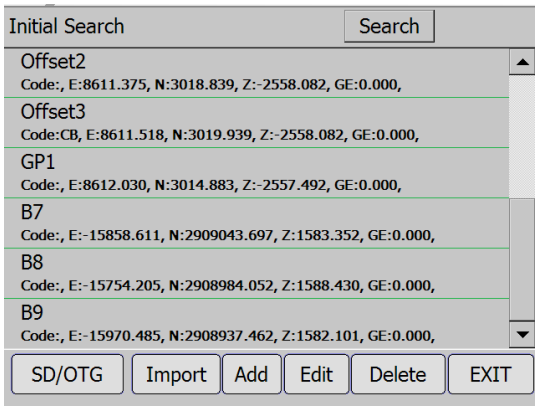
It can import coordinate data from other job, click the check box and import to existing

project.

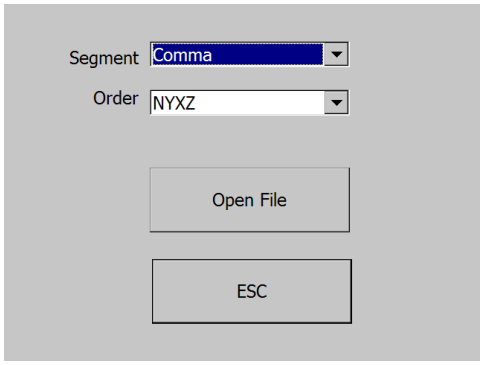


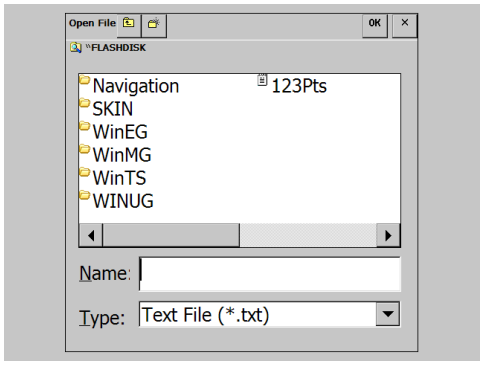


Clik OK and the cordinates will be uploaded to your current job.



Also, it can import from SD card in TXT file.

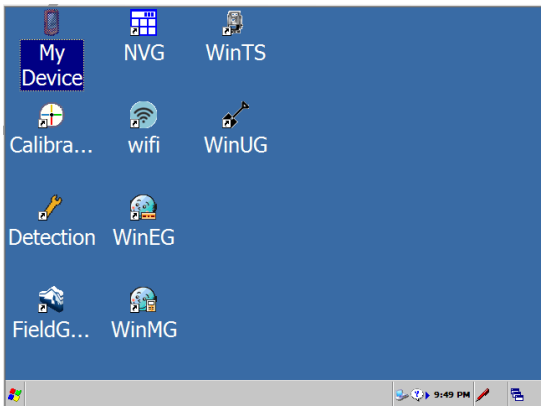


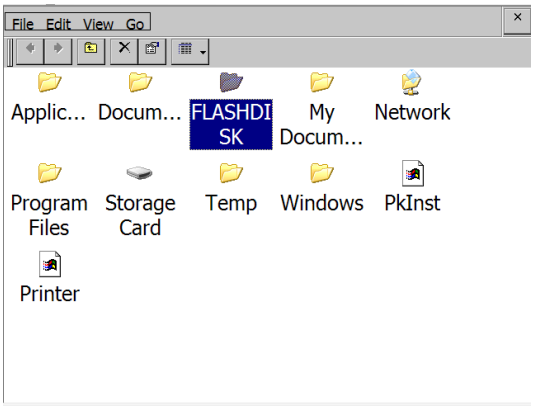


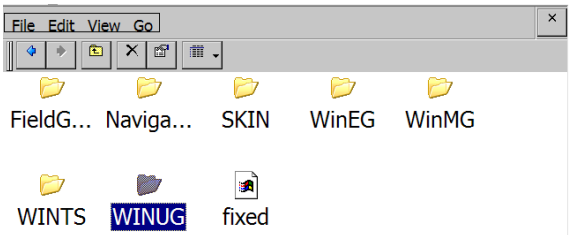
9.2 Data export

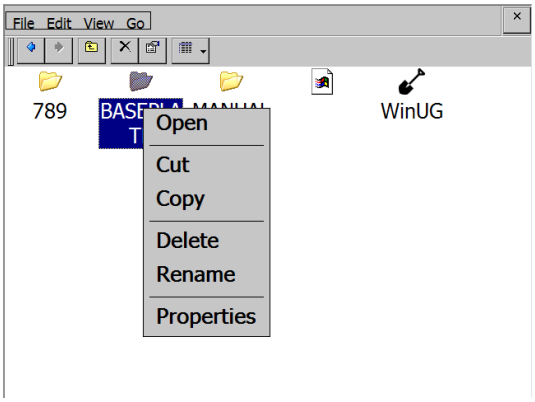
All data files are in installation path,

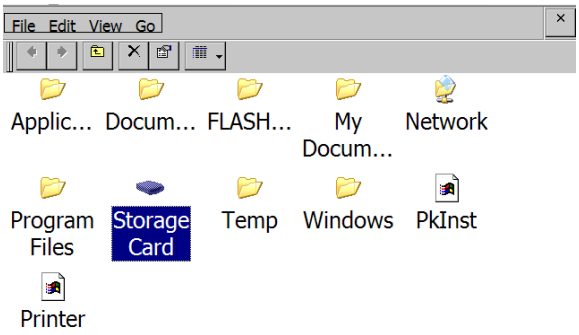
My device/Flashdisk/WINUG/, you can copy to SD card.

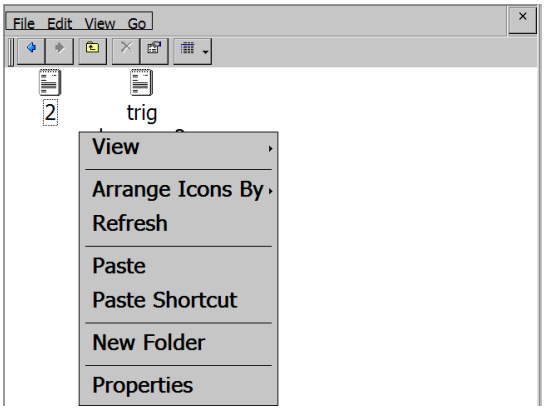

My Device
NVG
WinTS
Calibra...
wifi
WinUG
Detection
WinEG
FieldG...
WinMG

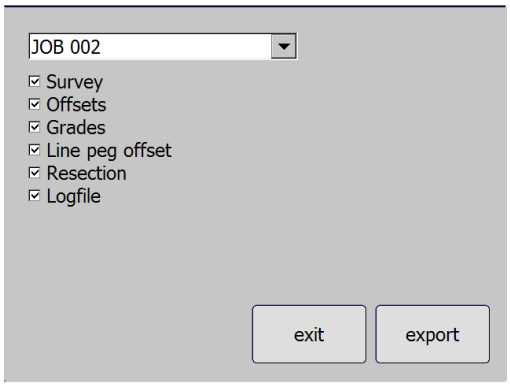

File Edit View Go
Applic...
Docum...
FLASHDISK
My Docum...
Network
Program Files
Storage Card
Temp
Windows
PkInst
Printer

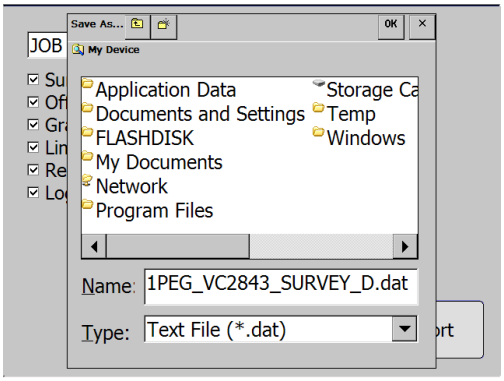

File Edit View Go
FieldG...
Naviga...
SKIN
WinEG
WinMG
WINTS
WINUG
fixed


File Edit View Go
789
WinUG
Open
Cut
Copy
Delete
Rename
Properties


File Edit View Go
Applic...
Docum...
FLASH...
My Docum...
Network
Program Files
Storage Card
Temp
Windows
PkInst
Printer

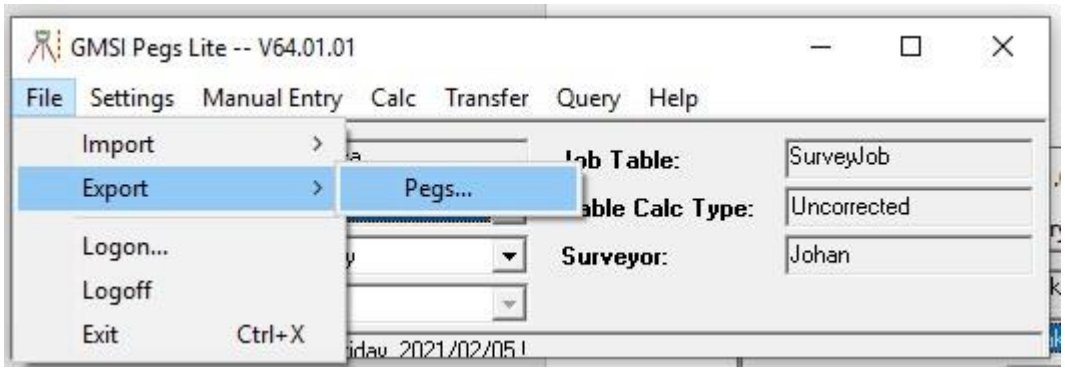

File Edit View Go
2
trig
View
Arrange Icons By
Refresh
Paste
Paste Shortcut
New Folder
Properties



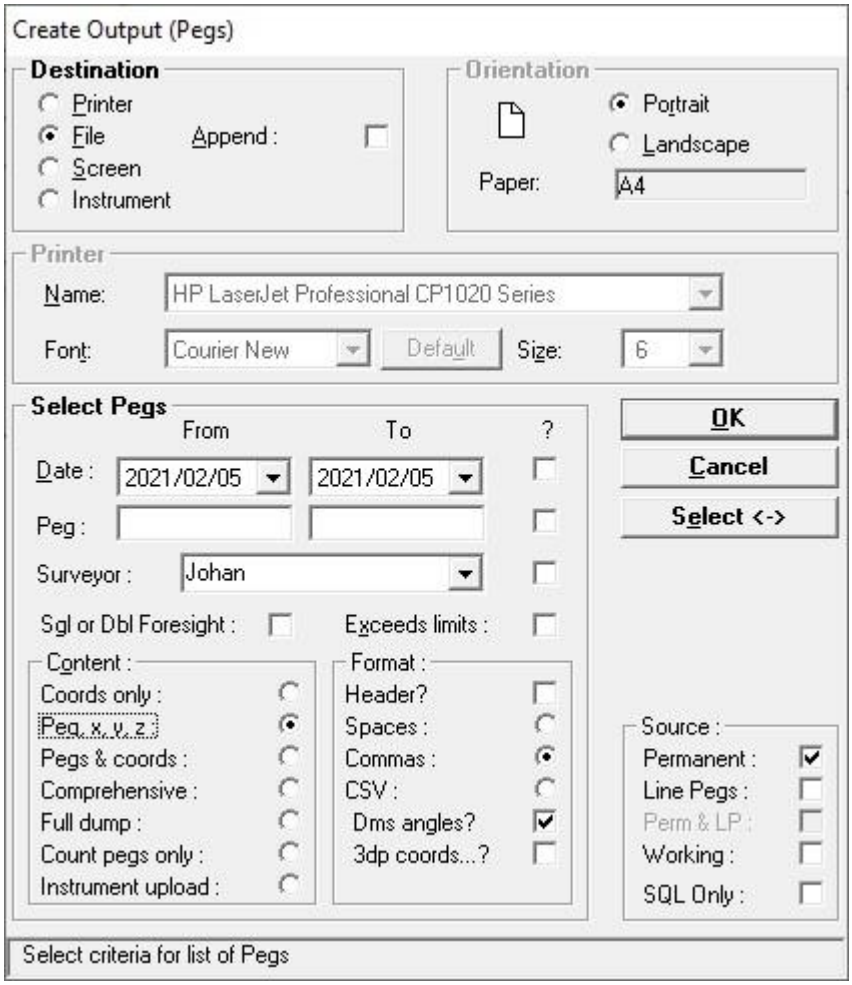


Pegs Lite to Total station via USB

Open Pegs Lite, File > Export > Pegs

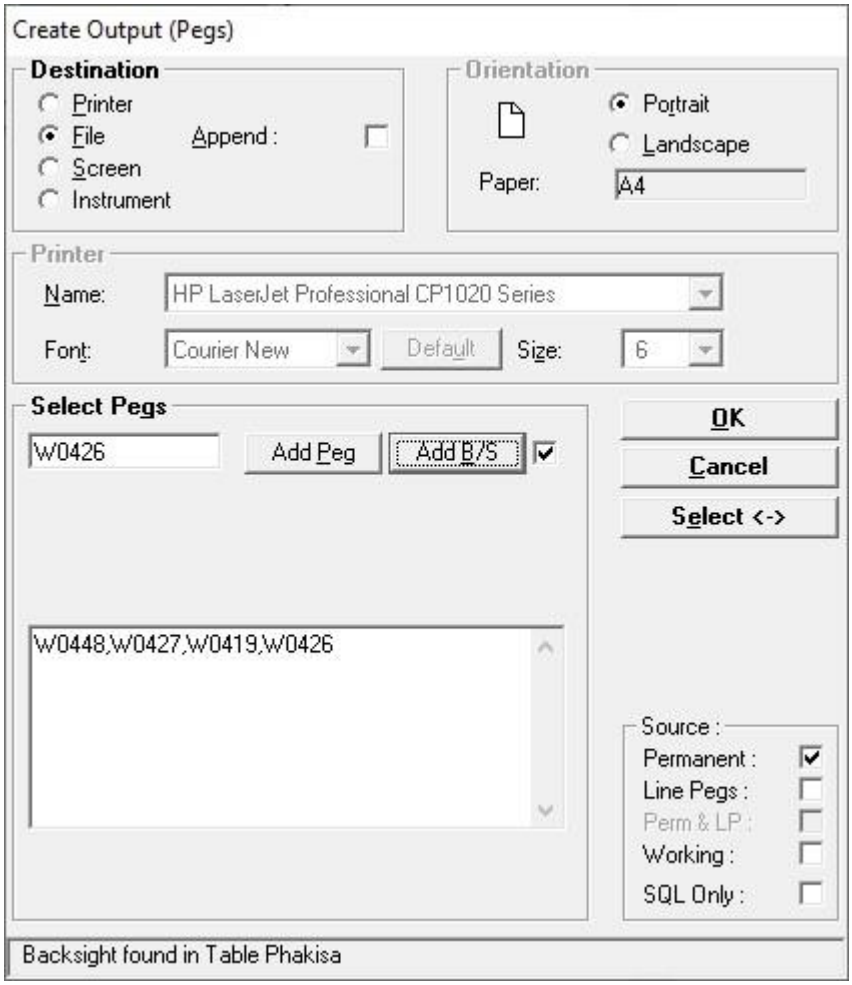


Select Destination which is **File**
Change content to (**Peg x, y, z**)
Change format to (**Commas**)



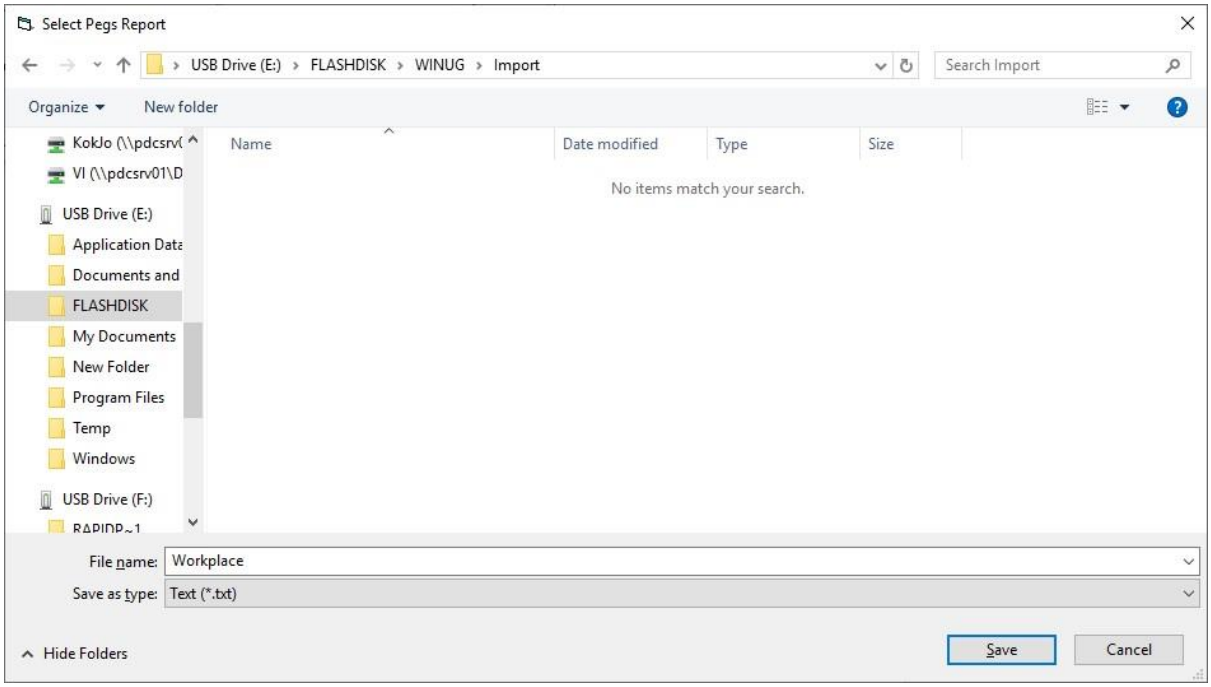
Click select twice to proceed to next screen

Add your peg and backsights and click OK when done.



To select the folder to save your coordinate file click on This PC > USB Drive > Flashdisk > WinUG > Import

Give file name at the bottom and also change Save as type to **Text** (*.txt) and click Save when you are done.



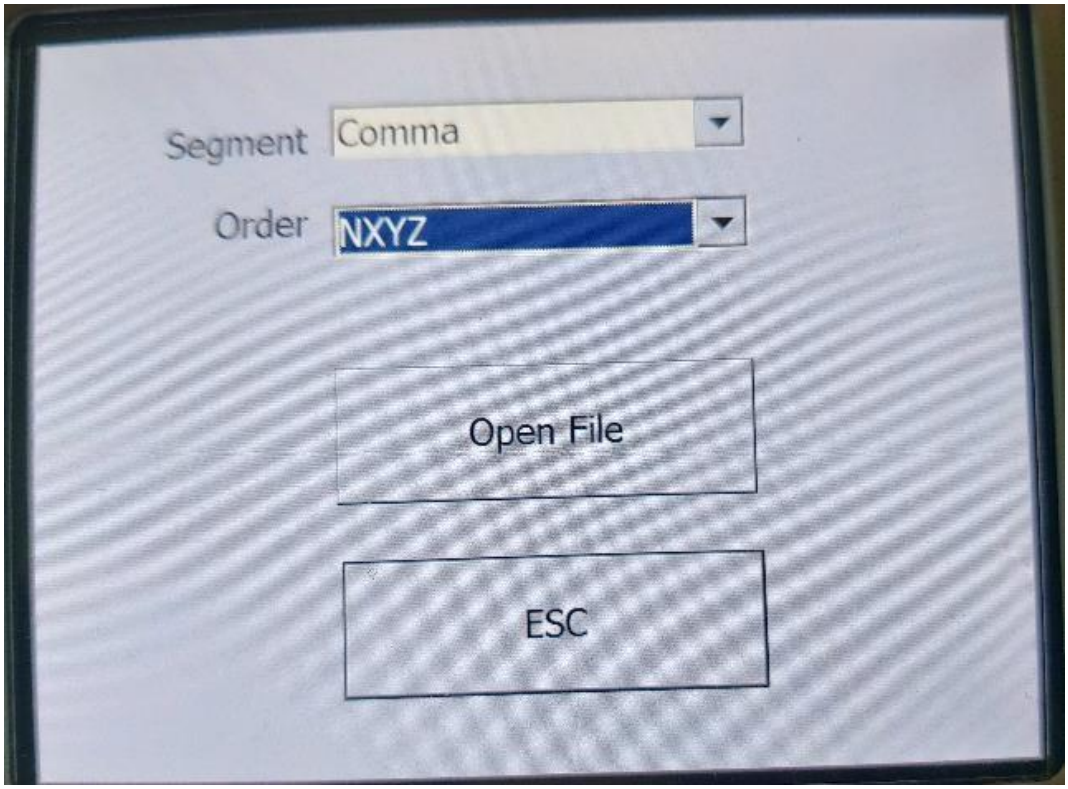
File should be output in the sequence below: check if you are not sure

Peg name,	X coordinate,	Y coordinate,	Elevation,	Grade Elevation
W0419,	3031.290,	8672.982,	-2556.957	0.000
W0426,	3021.193,	8690.431,	-2557.368	0.000
W0427,	3032.801,	8658.587,	-2556.662	0.000
W0448,	3016.710,	8616.682,	-2556.581	0.000

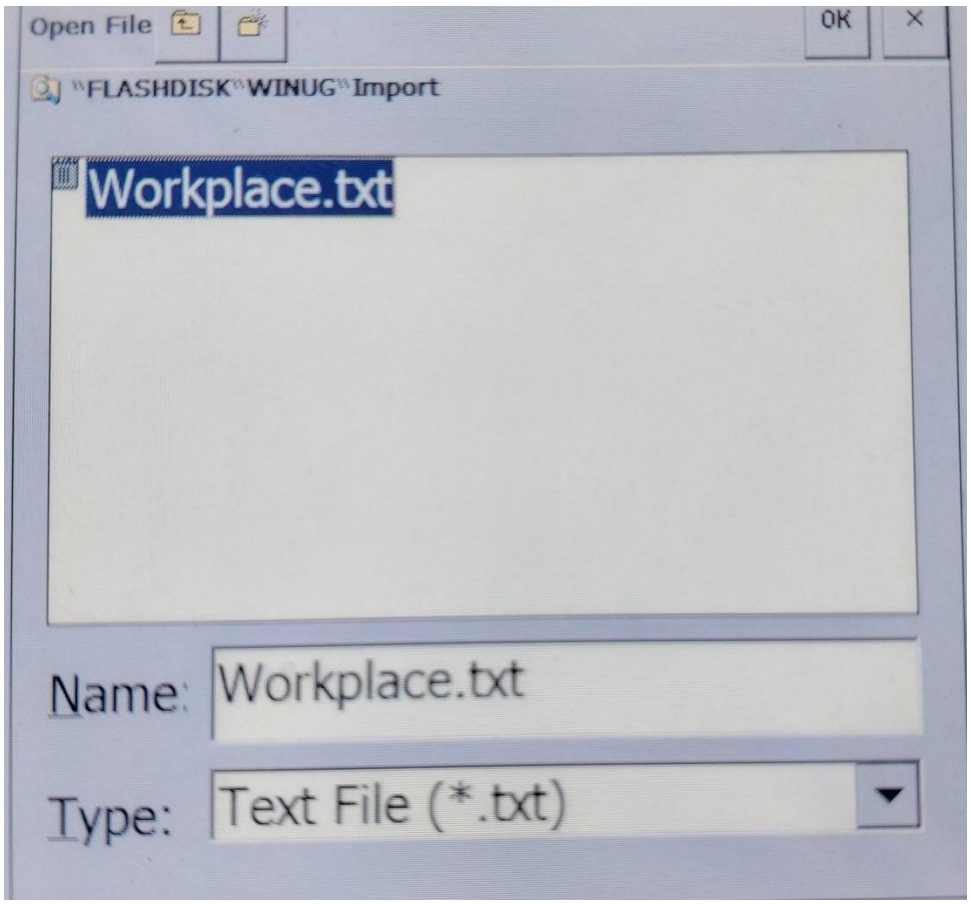
Once done sending the file to PC remove USB cable from Total station and switch off the total station.

Switch on total station and open Win UG

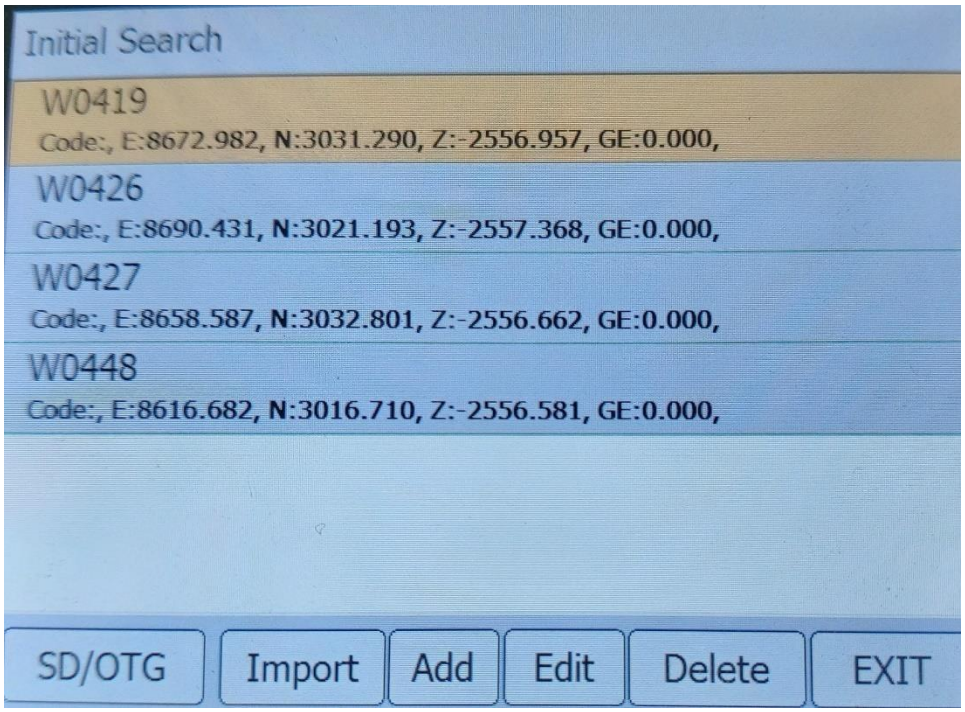
Create a job and once in the Job go to Coord > choose SD/OTG > Change order to **NYXZ** and click on Open File



Navigate to the folder with your file by clicking on Flashdisk > WinUG > Import then seect your workplace file and press enter on the total station and your coordinates will be added to your job.



Back in the Job if you select Coord you will find all the coordinates that were in the uploaded file.

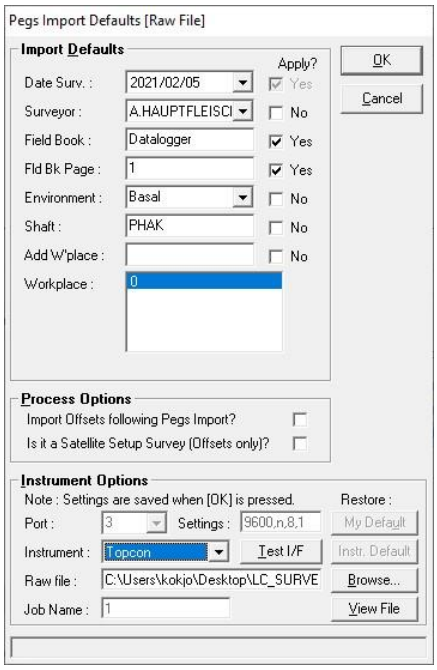


Downloading from Total station to PC via USB

Plug total station to PC via usb cable

Open Pegs lite > Click on File> Import> Import pegs> From Raw File>

Select the Browse option to search for your data



To navigate to the folder with your Survey data click on This PC > USB Drive > Flashdisk > WinUG > New Job > Survey and select the raw data file (_R.dat) and click open